WHAT IS CLAIMED IS:

1. A method of packaging integrated circuits, comprising:

disposing an integrated circuit chip outwardly from a first surface of a substrate;

positioning the integrated circuit chip and the substrate between a first mold press die and a second mold press die;

engaging the first mold press die with the second mold press die such that the integrated circuit chip is disposed within a cavity formed by the engagement of the first mold press die with the second mold press die, the cavity comprising a pre-warped configuration;

encapsulating the integrated circuit chip with a mold compound such that the mold compound takes on the pre-warped configuration of the cavity;

removing the encapsulated integrated circuit chip from the cavity; and

curing the mold compound, whereby the curing transforms the mold compound from the pre-warped configuration to a predefined configuration.

2. The method of Claim 1, further comprising coupling a plurality of solder balls to a second surface of the substrate opposite the first surface.

3. The method of Claim 1, further comprising disposing a leadframe around a periphery of the integrated circuit chip before the encapsulating step.

4. The method of Claim 1, wherein the pre-warped configuration of the cavity is defined by a first non-planar surface on the first mold press die and a second non-planar surface on the second mold press die.

5. The method of Claim 1, wherein the pre-warped configuration of the cavity is defined by a concave surface on the first mold press die and a convex surface on the second mold press die.

6. The method of Claim 1, wherein the predefined configuration substantially resembles a rectangular parallelpiped.

7. The method of Claim 1, wherein the integrated circuit packages comprise ball grid arrays.

8. The method of Claim 1, wherein the integrated circuit packages comprise quad flat packages.

9. A system for packaging integrated circuits, comprising:

an integrated circuit chip disposed outwardly from a first surface of a substrate;

a first mold press die comprising a first non-planar surface;

a second mold press die comprising a second non-planar surface;

the first and second non-planar surfaces forming upper and lower surfaces of a cavity when the first and second mold press die are engaged;

the cavity having a pre-warped configuration; and

a mold compound adapted to fill the cavity and encapsulate the integrated circuit chip, the mold compound adapted to transform from the pre-warped configuration to a predefined configuration after curing of the mold compound.

10. The system of Claim 9, further comprising a plurality of solder balls coupled to a second surface of the substrate opposite the first surface.

11. The system of Claim 9, further comprising a leadframe disposed around a periphery of the integrated circuit chip.

12. The system of Claim 9, wherein the first non-planar surface comprises a concave surface and the second non-planar surface comprises a convex surface.

13. The system of Claim 9, wherein the predefined configuration substantially resembles a rectangular parallelpiped.

14. The system of Claim 9, wherein the integrated circuit packages comprise ball grid arrays.

15. The system of Claim 9, wherein the integrated circuit packages comprise quad flat packages.

16. A method of packaging integrated circuits, comprising:

providing a substrate;

providing an integrated circuit chip adapted to couple to the substrate;

providing a first mold press die comprising a first non-planar surface;

providing a second mold press die comprising a second non-planar surface, the first and second non-planar surfaces forming upper and lower surfaces of a cavity when the first and second mold press die are engaged;

providing a mold compound adapted to fill the cavity and encapsulate the integrated circuit chip;

determining a pre-warped configuration for the cavity based on an anticipated warpage of the mold compound when removed from the cavity and further based on a predefined configuration of the mold compound after curing; and

causing the cavity to resemble the pre-warped configuration by shaping the first and second non-planar surfaces, whereby the mold compound is adapted to transform from the pre-warped configuration to a predefined configuration during the curing of the mold compound.

17. The method of Claim 16, wherein the first non-planar surface comprises a concave surface and the second non-planar surface comprises a convex surface.

18. The method of Claim 16, wherein the predefined configuration substantially resembles a rectangular parallelpiped.

19. The method of Claim 16, wherein the integrated circuit packages comprise ball grid arrays.

20. The method of Claim 16, wherein the integrated circuit packages comprise quad flat packages.